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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,971	02/19/2002	James O. Schreckengast	10014432-1	7508

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

HOLMES, MICHAEL B

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,971

Applicant(s)

SCHRECKENGAST ET AL.

Examiner

Michael B. Holmes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02192002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Office Action.



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Examiner's Detailed Office Action

1. This Office Action is responsive to application 10/078,971, filed February 19, 2002.
2. Claims 1-16 have been examined.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ching (USPN 6,078,901) in view of *Thiesson et al.* (USPN 6,807,537).

Regarding claim 1. *Ching* describes a method for constructing a decision support system comprising the following steps: (a) identifying an investment decision [see Fig. 11, C 33, L 20-27]; (b) identifying potential investments [see Fig. 11, C 33, L 20-27]; (c) utilizing domain experts to identify needed information to evaluate each investment [see C 11, L 66 to C 12, L 65]; (d) using domain experts to identify how to calculate investment risks [see C 11, L 66 to C 12, L 65].

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Ching does not describe the limitation, constructing a Bayesian network based on information obtained in steps (a) through (d). However, *Thiesson et al.* describes constructing a Bayesian network based on information obtained in steps (a) through (d) [see C 3, L 7 to C 4, L 7]. It would have been obvious at the time the invention was made to a persons having ordinary skill in the art to combine *Ching* with *Thiesson et al.* because the advent of artificial intelligence within computer science has brought an abundance of decision-support systems. Decision-support systems are computer systems in which decisions, typically rendered by humans, are recommended and sometimes made. In creating decision-support systems, computer scientists seek to provide decisions with the greatest possible accuracy. Thus, computer scientists strive to create decision-support systems that are equivalent to or more accurate than a human expert. Applications of decision-support systems include medical diagnosis, troubleshooting computer networks, or other systems wherein a decision is based upon identifiable criteria. One of the most promising new areas for research in decision-support systems is Bayesian networks. A Bayesian network is a representation of the probabilistic relationships among distinctions about the world [see *Thiesson et al.* C 1, L 11-26].

Regarding claim 2. *Ching* describes (f) using domain experts to identify how to calculate reliability of information obtained in step (c) [see C 8, L 23-34, *Examiner interprets a real estate agent as a domain expert in the field of real estate, which relies heavily on historical data*].

Regarding claim 3. *Ching* describes (f) using domain experts to identify how to calculate transaction costs for investments [see Figure 11, (*Single family houses*) & C 8, L 23-34, *Examiner interprets this to include e.g., real estate cost*].

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Regarding claim 4. *Ching* describes (c) includes the following substep: (c.1) using domain experts to identify pertinent information to obtain about an investor in order to perform the investment decision [see Figure 11, (*Single family houses*) & C 8, L 23-34, *Examiner interprets this to include e.g., real estate agent acquiring information such as a credit report*].

Regarding claim 5. *Ching* describes (c) includes the following substep: (c.1) using domain experts to identify pertinent information to obtain about an investor in order to perform the investment decision, the pertinent information including at least one of the following: investment time horizon, risk toleration, desired return, available capital [see Figure 11, (*Single family houses*) & C 8, L 23-34, *Examiner interprets this to include e.g., real estate agent acquiring information such as income statements*].

Regarding claim 6. *Ching* describes (b) identifying potential investments comprises the following substeps: (b.1) identifying investment types [see Figure 11, (*business opportunities*); and, (b.2) identifying particular investments with the investment types [see Figure 11, (*small businesses*)].

5. Claims 7, 9-11 & 12, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Thiesson et al.* (USPN 6,807,537) in view of *Ching* (USPN 6,078,901).

Regarding claim 7. *Thiesson et al.* describes a decision support system [see C 1, 23-24] for supporting investment decisions comprising: a decision support engine [see C 3, L 30-32]; and, a

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Bayesian network traversed by the decision support engine, the Bayesian network comprising: an investment decision node identifying an investment decision, potential investment nodes identifying potential investments, and information nodes identifying information to be obtained, the information to be obtained being matched to potential investments, wherein reliability of the information is estimated [*see C 29, L 4-27, Examiner interprets nodes as a inherent part of the Bayesian network, of which may be populated by various forms of probabilistic information e.g., investment, medical, etc.*]

Thiesson et al. does not describe investment decisions. However, *Ching* describes investment decisions [*see Fig. 11, C 33, L 20-27*]. It would have been obvious at the time the invention was made to a persons having ordinary skill in the art to combine *Thiesson et al.* with *Ching* because price is still an unsolved problem. It is a problem that has puzzled experts and laymen alike for over five thousand years, or for as long as history can recall. In spite of claims of breakthroughs by past thinkers and modern social scientists, all the current solutions to the problem of price determination cannot produce any deterministic, or non-arbitrary, price in practice [*see C 1, L 30-36*].

Regarding claims 9 & 14. *Ching* describes the information to be obtained includes additional information about the potential investments to be obtained from a database [*see Abstract, Examiner interprets database to be a file e.g., spreadsheet composed of records, each containing fields together with a set of operations for searching, sorting, recombining, and other functions*].

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Regarding claims 10 & 15. *Ching* describes the information to be obtained includes additional information to be obtained from a potential investor [see Figure 11, *Examiner interprets a Large corporation to be a potential investor*].

Regarding claims 11 & 16. *Ching* describes the information to be obtained includes additional information to be obtained from a potential investor, including at least one of the following: investment time horizon; risk toleration; desired return; available capital [see Figure 11, *Examiner interprets a Large corporation to be a potential investor, and the investment time horizon as the Investment period of 4 years*].

6. Claims 8 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Thiesson et al.* (USPN 6,807,537) in view of *Ching* (USPN 6,078,901) in further view of *Amado* (USPN 5,701,400).

Thiesson et al. and *Ching* have been discussed above and do not describe the limitation of claim 8 & 13, a knowledge acquisition tool for building a Bayesian Network. However, *Amado* describes the limitation of claim 8 & 13, a knowledge acquisition tool for building a Bayesian Network.

Regarding claims 8 & 13. *Amado* describes a knowledge acquisition tool for building the Bayesian network [see C 13, L 63 to C 14, L 8]. It would have been obvious at the time the invention was made to a persons having ordinary skill in the art to combine *Thiesson et al.* and *Ching* with *Amado* because the *Amado* invention as a whole directly relates to the fields of artificial intelligence, decision-support software and expert systems.

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Correspondence Information

7. Any inquires concerning this communication or earlier communications from the examiner should be directed to Michael B. Holmes, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-3686 or facsimile transmission (571) 273-3686 or email Michael.holmesb@uspto.gov.

If you need to send an Official facsimile transmission, please send it to (703) 746-7239.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, Anthony Knight, may be reached at (571) 272-3687.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

A handwritten signature in black ink, appearing to read 'Michael B. Holmes', with a stylized, cursive script.

Michael B. Holmes
Patent Examiner
Artificial Intelligence
Art Unit 2121

United States Department of Commerce
Patent & Trademark Office

Tuesday, May 31, 2005

MBH